

## SEQUENCE LISTING

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Val Thr Glu Tyr Ala Ser Leu Gly Ser Leu Tyr Asp Tyr Ile Asn Ser

- 90 -

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	Gly Val Leu Lys Ile Cys Asp Phe Gly Ala Ser Arg Phe His Asn His		
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	Val Ile Gln Ser Leu Pro Val Ser Glu Thr Cys Asp Thr Tyr Ser Tyr		
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25	Leu Glu Gly Leu Gln Val Ala Trp Leu Val Val Glu Lys Asn Glu Arg		
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	Leu Thr Ile Pro Ser Ser Cys Pro Arg Ser Phe Ala Glu Leu Leu His		
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			240
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	Ile Ser Ile Leu Glu Ser Met Ser Asn Asp Thr Ser Leu Pro Asp Lys		
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	Ala Thr Leu Glu Arg Leu Lys Lys Leu Glu Arg Asp Leu Ser Phe Lys		
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	Glu Gln Glu Leu Lys Glu Arg Glu Arg Arg Leu Lys Met Trp Glu Gln		
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45	Lys Leu Thr Glu Gln Ser Asn Thr Pro Leu Leu Leu Pro Leu Ala Ala		
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	Arg Met Ser Glu Glu Ser Tyr Phe Glu Ser Lys Thr Glu Glu Ser Asn		
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	His Gly Met Asn Pro Ser Leu Gln Ala Met Met Leu Met Gly Phe Gly		

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				400
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	Ala Lys Trp Ile Ser Gln Asp Lys Glu Val Ala Val Lys Lys Leu Leu			
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	Ile Ile Gln Phe Tyr Gly Val Ile Leu Glu Pro Pro Asn Tyr Gly Ile			
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	Val Thr Glu Tyr Ala Ser Leu Gly Ser Leu Tyr Asp Tyr Ile Asn Ser			
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	Val Ile His Arg Asp Leu Lys Ser Arg Asn Val Val Ile Ala Ala Asp			
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	gga gta ctg aag atc tgt gac ttt ggt gcc tct cgg ttc cat aac cat			480
	Gly Val Leu Lys Ile Cys Asp Phe Gly Ala Ser Arg Phe His Asn His			
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	Thr Thr His Met Ser Leu Val Gly Thr Phe Pro Trp Met Ala Pro Glu			
	165	170	175	
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	Cys Asn Ser Phe Leu His Asn Lys Ala Glu Trp Arg Cys Glu Ile Glu			
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35	att ttt acc cag aaa agc aag ccg ggg cct gac ccg ttg gac acg aga	488		
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	275 280 285 290	
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	295 300 305	
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	310 315 320	
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Arg Pro Gly Pro Ala Ala Gly Cys Val Arg Gly Glu Arg Pro Gly Trp  
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Ala Ala Gly Pro Gly Ala Glu Pro Arg Arg Val Gly Leu Gly Leu Pro  
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Ser Ala Gly Ser Ser Ser Glu Ala Ile Leu Asn Thr Met Ser Gln Glu  
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25 Leu Val Gln Gln Gly Ile Ala His Arg Asp Leu Lys Ser Asp Asn Ile  
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Phe Gly Cys Cys Leu Ala Asp Glu Ser Ile Gly Leu Gln Leu Pro Phe  
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Glu Val Ser Thr Ala Arg Pro Gly Pro Arg Ala Val Ile Asp Tyr Ser  
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40 Lys Ala Asp Ala Trp Ala Val Gly Ala Ile Ala Tyr Glu Ile Phe Gly  
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Ser Tyr Gln Glu Ala Gln Leu Pro Ala Leu Pro Glu Ser Val Pro Pro  
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Arg Pro Ser Ala Arg Val Ala Ala Asn Val Leu His Leu Ser Leu Trp  
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Gly Glu His Ile Leu Ala Leu Lys Asn Leu Lys Leu Asp Lys Met Val  
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Gly Trp Leu Leu Gln Gln Ser Ala Ala Thr Leu Leu Ala Asn Arg Leu  
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Glu Lys Gln Ala Glu Ser Arg Arg Ala Val Ser Ala Cys Gln Glu Ile	
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Thr Arg Arg Leu Gln Gly Phe Arg Leu Glu Glu Tyr Leu Ile Gly Gln	
145 150 155 160	
15 tcc att ggt aag gg <sup>c</sup> tc <sup>c</sup> agt gct g <sup>t</sup> g <sup>t</sup> tat gaa g <sup>c</sup> cc <sup>c</sup> at <sup>t</sup> g <sup>c</sup> c <sup>t</sup>	528
Ser Ile Gly Lys Gly Cys Ser Ala Ala Val Tyr Glu Ala Thr Met Pro	
165 170 175	
20 aca tt <sup>t</sup> ccc cag aac ct <sup>t</sup> gag gt <sup>t</sup> aca aag agc acc gg <sup>g</sup> tt <sup>t</sup> c <sup>t</sup> t <sup>t</sup> c <sup>c</sup>	576
Thr Leu Pro Gln Asn Leu Glu Val Thr Lys Ser Thr Gly Leu Leu Pro	
180 185 190	
25 ggg aga ggc cca ggt acc agt gca cca gga gaa gg <sup>g</sup> cag gag cga gct	624
Gly Arg Gly Pro Gly Thr Ser Ala Pro Gly Glu Gly Gln Glu Arg Ala	
195 200 205	
30 cc <sup>g</sup> gg <sup>g</sup> gg <sup>c</sup> cct gg <sup>c</sup> ttc ccc tt <sup>t</sup> gg <sup>c</sup> atc aag at <sup>t</sup> at <sup>t</sup> tgg aac atc	672
Pro Gly Ala Pro Ala Phe Pro Leu Ala Ile Lys Met Met Trp Asn Ile	
210 215 220	
35 tc <sup>t</sup> gca ggt tcc tcc agc gaa gg <sup>c</sup> atc tt <sup>t</sup> aac aca at <sup>t</sup> agc cag gag	720
Ser Ala Gly Ser Ser Glu Ala Ile Leu Asn Thr Met Ser Gln Glu	
225 230 235 240	
40 ct <sup>t</sup> gtc cca gcg agc cga gt <sup>t</sup> gg <sup>c</sup> tt <sup>t</sup> gct gg <sup>g</sup> gag tat gga gca gtc	768
Leu Val Pro Ala Ser Arg Val Ala Leu Ala Gly Glu Tyr Gly Ala Val	
245 250 255	
45 act tac aga aaa tcc aag aga ggt ccc aag caa cta gg <sup>c</sup> cct cac ccc	816
Thr Tyr Arg Lys Ser Lys Arg Gly Pro Lys Gln Leu Ala Pro His Pro	
260 265 270	
50 aac atc atc cg <sup>g</sup> gtt ctc cgc gg <sup>c</sup> ttc acc tct tcc gt <sup>t</sup> cc <sup>g</sup> ct <sup>t</sup> ct <sup>t</sup>	864
Asn Ile Ile Arg Val Leu Arg Ala Phe Thr Ser Ser Val Pro Leu Leu	
275 280 285	
55 cca gg <sup>g</sup> gg <sup>c</sup> ct <sup>t</sup> gtc gac tac cct gat gt <sup>t</sup> ct <sup>t</sup> ccc tca cgc ctc cac	912
Pro Gly Ala Leu Val Asp Tyr Pro Asp Val Leu Pro Ser Arg Leu His	
290 295 300	
60 cct gaa ggc ct <sup>t</sup> gg <sup>c</sup> cat gg <sup>c</sup> cg <sup>g</sup> ac <sup>g</sup> ct <sup>t</sup> ctc gtt at <sup>t</sup> aag aac	960
Pro Glu Gly Leu Gly His Gly Arg Thr Leu Phe Leu Val Met Lys Asn	
305 310 315 320	
65 tat ccc tgt acc ct <sup>t</sup> cgc cag tac ctt tgt gt <sup>t</sup> aac aca ccc agc ccc	1008
Tyr Pro Cys Thr Leu Arg Gln Tyr Leu Cys Val Asn Thr Pro Ser Pro	

	325	330	335	
	cgc ctc gcc gcc atg atg ctg ctg cag ctg ctg gaa ggc gtg gac cat Arg Leu Ala Ala Met Met Leu Leu Gln Leu Leu Glu Gly Val Asp His			1056
5	340	345	350	
	ctg gtt caa cag ggc atc gcg cac aga gac ctg aaa tcc gac aac atc Leu Val Gln Gln Gly Ile Ala His Arg Asp Leu Lys Ser Asp Asn Ile			1104
	355	360	365	
10	ctt gtg gag ctg gac cca gac ggc tgc ccc tgg ctg gtg atc gca gat Leu Val Glu Leu Asp Pro Asp Gly Cys Pro Trp Leu Val Ile Ala Asp			1152
	370	375	380	
15	ttt ggc tgc tgc ctg gct gat gag agc atc ggc ctg cag ttg ccc ttc Phe Gly Cys Cys Leu Ala Asp Glu Ser Ile Gly Leu Gln Leu Pro Phe			1200
	385	390	395	400
20	agc agc tgg tac gtg gat cgg ggc gga aac ggc tgt ctg atg gcc cca Ser Ser Trp Tyr Val Asp Arg Gly Gly Asn Gly Cys Leu Met Ala Pro			1248
	405	410	415	
25	gag gtg tcc acg gcc cgt cct ggc ccc agg gca gtg att gac tac agc Glu Val Ser Thr Ala Arg Pro Gly Pro Arg Ala Val Ile Asp Tyr Ser			1296
	420	425	430	
30	aag gct gat gcc tgg gca gtg gga gcc atc gcc tat gaa atc ttc ggg Lys Ala Asp Ala Trp Ala Val Gly Ala Ile Ala Tyr Glu Ile Phe Gly			1344
	435	440	445	
35	ctt gtc aat ccc ttc tac ggc cag ggc aag gcc cac ctt gaa agc cgc Leu Val Asn Pro Phe Tyr Gly Gln Gly Lys Ala His Leu Glu Ser Arg			1392
	450	455	460	
40	agc tac caa gag gct cag cta cct gca ctg ccc gag tca gtg cct cca Ser Tyr Gln Glu Ala Gln Leu Pro Ala Leu Pro Glu Ser Val Pro Pro			1440
	465	470	475	480
45	gac gtg aga cag ttg gtg agg gca ctg ctc cag cga gag gcc agc aag Asp Val Arg Gln Leu Val Arg Ala Leu Leu Gln Arg Glu Ala Ser Lys			1488
	485	490	495	
	aga cca tct gcc cga gta gcc gca aat gtg ctt cat cta agc ctc tgg Arg Pro Ser Ala Arg Val Ala Ala Asn Val Leu His Leu Ser Leu Trp			1536
	500	505	510	
50	ggt gaa cat att cta gcc ctg aag aat ctg aag tta gac aag atg gtt Gly Glu His Ile Leu Ala Leu Lys Asn Leu Lys Leu Asp Lys Met Val			1584
	515	520	525	
	ggc tgg ctc ctc caa caa tcg gcc act ttg ttg gcc aac agg ctc Gly Trp Leu Leu Gln Gln Ser Ala Ala Thr Leu Leu Ala Asn Arg Leu			1632
	530	535	540	

aca gag aag tgt tgt gtg gaa aca aaa atg aag atg ctc ttt ctg gct 1680  
 Thr Glu Lys Cys Cys Val Glu Thr Lys Met Lys Met Leu Phe Leu Ala  
 545 550 555 560  
  
 5 aac ctg gag tgt gaa acg ctc tgc cag gca gcc ctc ctc ctc tgc tca 1728  
 Asn Leu Glu Cys Glu Thr Leu Cys Gln Ala Ala Leu Leu Leu Cys Ser  
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 10 tgg agg gca gcc ctg 1743  
 Trp Arg Ala Ala Leu  
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 gaacatgtat tgaattggac ttagctgaac aggctgctgg ttggctgccc agagggggca 180  
 30 ggctgtgttg ctgggagcct tccagctccc tgcagcagtc atggggcagg gttccccgag 240  
 tccgtaatcc ccatttccac ctactttccc ttag tta ttt gat tcc ctg tct gtc 295  
 Leu Phe Asp Ser Leu Ser Val  
 1 5

35 gta ctc agc tta agt gga gca tcc cct ttc ctg gga gac acg aag cag 343  
 Val Leu Ser Leu Ser Gly Ala Ser Pro Phe Leu Gly Asp Thr Lys Gin  
 10 15 20

40 gaa aca ctg gca aat atc aca gca gtg agt tac gac ttt gat gag gaa 391  
 Glu Thr Leu Ala Asn Ile Thr Ala Val Ser Tyr Asp Phe Asp Glu Glu  
 25 30 35

45 ttc ttc agc cag acg acg gag ctg gcc aag gac ttt att cgg aag ctt 439  
 Phe Phe Ser Gln Thr Ser Glu Leu Ala Lys Asp Phe Ile Arg Lys Leu  
 40 45 50 55

50 ctg gtt aaa gag acc cgg aaa cgg ctc aca atc caa gag gct ctc aga 487  
 Leu Val Lys Glu Thr Arg Lys Arg Leu Thr Ile Gln Glu Ala Leu Arg  
 60 65 70

cac ccc tgg atc acg ccg gtg gac aac cag caa gcc atg gtg cgc agg 535  
 His Pro Trp Ile Thr Pro Val Asp Asn Gln Gln Ala Met Val Arg Arg  
 75 80 85

gag tct gtg gtc aat ctg gag aac ttc agg aag cag tat gtc cgc agg	583
Glu Ser Val Val Asn Leu Glu Asn Phe Arg Lys Gln Tyr Val Arg Arg	
90	95
95	100
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cgg tgg aag ctt tcc ttc agc atc gtg tcc ctg tgc aac cac ctc acc	631
Arg Trp Lys Leu Ser Phe Ser Ile Val Ser Leu Cys Asn His Leu Thr	
105	110
110	115
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cgc tcg ctg atg aag aag gtg cac ctg agg ccg gat gag gac ctg agg	679
Arg Ser Leu Met Lys Lys Val His Leu Arg Pro Asp Glu Asp Leu Arg	
120	125
125	130
130	135
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aac tgt gag agt gac act gag gag gac atc gcc agg agg aaa gcc ctc	727
Asn Cys Glu Ser Asp Thr Glu Glu Asp Ile Ala Arg Arg Lys Ala Leu	
140	145
145	150
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cac cca cgg agg agg agc agc acc tcc taactggcct gacctgcagt	774
His Pro Arg Arg Ser Ser Thr Ser	
155	160
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ggccgccagg gaggtctggg cccagcgggg ctcccctctg tgcagacttt tggaccacgc	834
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gagactggga gtggggctc acgcctataa tccctgcgtt ttggcagtcc gaggcagggg	1614
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aattgcttga actcaggagt tggagaccag cctggcaac atggcaaaac gcagtctgtt	1674
caaaaaatac aaaaaattag ccaggtgttag gggtaggcac ctggcatccc agctactcca	1734
ggggctgagg tgacagcatt gcttaagccc agaaggtcga ggctgcagtg agctgagatc	1794

- 104 -

acgccactgc actccagtct gggtgacaga gagagaccat atccaaaaaa aaaaaaaaaa 1854

gggcggccgc 1864

5

&lt;210&gt; 11

&lt;211&gt; 160

&lt;212&gt; PRT

10 &lt;213&gt; Homo sapiens

&lt;400&gt; 11

Leu Phe Asp Ser Leu Ser Val Val Leu Ser Leu Ser Gly Ala Ser Pro  
1 5 10 15

15

Phe Leu Gly Asp Thr Lys Gln Glu Thr Leu Ala Asn Ile Thr Ala Val  
20 25 30

20

Ser Tyr Asp Phe Asp Glu Glu Phe Phe Ser Gln Thr Ser Glu Leu Ala  
35 40 45Lys Asp Phe Ile Arg Lys Leu Leu Val Lys Glu Thr Arg Lys Arg Leu  
50 55 60

25

Thr Ile Gln Glu Ala Leu Arg His Pro Trp Ile Thr Pro Val Asp Asn  
65 70 75 80Gln Gln Ala Met Val Arg Arg Glu Ser Val Val Asn Leu Glu Asn Phe  
85 90 95

30

Arg Lys Gln Tyr Val Arg Arg Arg Trp Lys Leu Ser Phe Ser Ile Val  
100 105 110

35

Ser Leu Cys Asn His Leu Thr Arg Ser Leu Met Lys Lys Val His Leu  
115 120 125Arg Pro Asp Glu Asp Leu Arg Asn Cys Glu Ser Asp Thr Glu Glu Asp  
130 135 140

40

Ile Ala Arg Arg Lys Ala Leu His Pro Arg Arg Arg Ser Ser Thr Ser  
145 150 155 160

&lt;210&gt; 12

45 &lt;211&gt; 480

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

50 &lt;221&gt; CDS

&lt;222&gt; (1)...(480)

&lt;400&gt; 12

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Leu	Phe	Asp	Ser	Leu	Ser	Val	Val	Leu	Ser	Leu	Ser	Gly	Ala	Ser	Pro		
1				5				10					15				
															96		
5	ttc	ctg	gga	gac	acg	aag	cag	gaa	aca	ctg	gca	aat	atc	aca	gca	gtg	
	Phe	Leu	Gly	Asp	Thr	Lys	Gln	Glu	Thr	Leu	Ala	Asn	Ile	Thr	Ala	Val	
	20							25						30			
															144		
10	agt	tac	gac	ttt	gat	gag	gaa	ttc	ttc	agc	cag	acg	gag	ctg	gcc		
	Ser	Tyr	Asp	Phe	Asp	Glu	Glu	Phe	Phe	Ser	Gln	Thr	Ser	Glu	Leu	Ala	
	35							40					45				
															192		
	aag	gac	ttt	att	cg	aag	ctt	ctg	gtt	aaa	gag	acc	cg	aaa	cg	ctc	
	Lys	Asp	Phe	Ile	Arg	Lys	Leu	Leu	Val	Lys	Glu	Thr	Arg	Lys	Arg	Leu	
	50							55					60				
15	aca	atc	caa	gag	gct	ctc	aga	cac	ccc	tgg	atc	acg	ccg	gtg	gac	aac	
	Thr	Ile	Gln	Glu	Ala	Leu	Arg	His	Pro	Trp	Ile	Thr	Pro	Val	Asp	Asn	
	65							70				75		80			
20	cag	caa	gcc	atg	gtg	cgc	agg	gag	tct	gtg	gtc	aat	ctg	gag	aac	ttc	
	Gln	Gln	Ala	Met	Val	Arg	Arg	Glu	Ser	Val	Val	Asn	Leu	Glu	Asn	Phe	
	85							90					95				
25	agg	aag	cag	tat	gtc	cgc	agg	cg	tgg	aag	ctt	tcc	ttc	agc	atc	gtg	
	Arg	Lys	Gln	Tyr	Val	Arg	Arg	Arg	Trp	Lys	Leu	Ser	Phe	Ser	Ile	Val	
	100							105					110				
30	tcc	ctg	tgc	aac	cac	ctc	acc	cgc	tcg	atg	aag	aag	gtg	cac	ctg		
	Ser	Leu	Cys	Asn	His	Leu	Thr	Arg	Ser	Leu	Met	Lys	Lys	Val	His	Leu	
	115							120					125				
35	agg	ccg	gat	gag	gac	ctg	agg	aac	tgt	gag	agt	gac	act	gag	gag	gac	
	Arg	Pro	Asp	Glu	Asp	Leu	Arg	Asn	Cys	Glu	Ser	Asp	Thr	Glu	Glu	Asp	
	130							135					140				
40	atc	gcc	agg	agg	aaa	gcc	ctc	cac	cca	cg	agg	agg	agc	agc	acc	tcc	
	Ile	Ala	Arg	Arg	Lys	Ala	Leu	His	Pro	Arg	Arg	Arg	Ser	Ser	Thr	Ser	
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		Thr	Ala	Leu	Ala	Lys	Glu	Leu	Arg	Glu	Leu	Arg	Ile	Glu	Glu	Thr	Asn
		1						5					10			15	

cgc cca atg aag aag gtg act gat tac tcc tcc tcc agt gag gag tca 97  
 Arg Pro Met Lys Lys Val Thr Asp Tyr Ser Ser Ser Glu Glu Ser  
       20                 25                 30

5 gaa agt agc gag gaa gag gag gaa gat gga gag agc gag acc cat gat 145  
 Glu Ser Ser Glu Glu Glu Asp Gly Glu Ser Glu Thr His Asp  
       35                 40                 45

10 ggg aca gtg gct gtc agc gac ata ccc aga ctg ata cca aca gga gct 193  
 Gly Thr Val Ala Val Ser Asp Ile Pro Arg Leu Ile Pro Thr Gly Ala  
       50                 55                 60

15 cca ggc agc aac gag cag tac aat gtg gga atg gtg ggg acg cat ggg 241  
 Pro Gly Ser Asn Glu Gln Tyr Asn Val Gly Met Val Gly Thr His Gly  
       65                 70                 75                 80

20 ctg gag acc tct cat gcg gac agt ttc agc ggc agt att tca aga gaa 289  
 Leu Glu Thr Ser His Ala Asp Ser Phe Ser Gly Ser Ile Ser Arg Glu  
       85                 90                 95

25 gga acc ttg atg att aga gag acg tct gga gag aag aag cga tct ggc 337  
 Gly Thr Leu Met Ile Arg Glu Thr Ser Gly Glu Lys Lys Arg Ser Gly  
       100                105                110

30 cac agt gac agc aat ggc ttt gct ggc cac atc aac ctc cct gac ctg 385  
 His Ser Asp Ser Asn Gly Phe Ala Gly His Ile Asn Leu Pro Asp Leu  
       115                120                125

35 gtg cag cag agc cat tct cca gct gga acc ccg act gag gga ctg ggg 433  
 Val Gln Gln Ser His Ser Pro Ala Gly Thr Pro Thr Glu Gly Leu Gly  
       130                135                140

40 cgc gtc tca acc cat tcc cag gag atg gac tct ggg act gaa tat ggc 481  
 Arg Val Ser Thr His Ser Gln Glu Met Asp Ser Gly Thr Glu Tyr Gly  
       145                150                155                160

45 atg ggg agc agc acc aaa gcc tcc ttc acc ccc ttt gtg gac ccc aga 529  
 Met Gly Ser Ser Thr Lys Ala Ser Phe Thr Pro Phe Val Asp Pro Arg  
       165                170                175

50 gta tac cag acg tct ccc act gat gaa gat gaa gag gat gag gaa tca 577  
 Val Tyr Gln Thr Ser Pro Thr Asp Glu Asp Glu Asp Glu Glu Ser  
       180                185                190

55 tca gcc gca gct ctg ttt act agc gaa ctt ctt agg caa gaa cag gcc 625  
 Ser Ala Ala Ala Leu Phe Thr Ser Glu Leu Leu Arg Gln Glu Gln Ala  
       195                200                205

60 aaa ctc aat gaa gca aga aag att tcg gtg gta aat gta aac cca acc 673  
 Lys Leu Asn Glu Ala Arg Lys Ile Ser Val Val Asn Val Asn Pro Thr  
       210                215                220

65 aac att cgg cct cat agc gac aca cca gaa atc aga aaa tac aag aaa 721  
 Asn Ile Arg Pro His Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys

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	cga ttc aac tca gaa ata ctt tgt gca gct ctg tgg ggt gta aac ctt				769
	Arg Phe Asn Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu				
5	245		250	255	
	ctg gtg ggg act gaa aat ggc ctg atg ctt ttg gac cga agt ggg caa				817
	Leu Val Gly Thr Glu Asn Gly Leu Met Leu Leu Asp Arg Ser Gly Gln				
	260	265		270	
10	ggc aaa gtc tat aat ctg atc aac cgg agg cga ttt cag cag atg gat				865
	Gly Lys Val Tyr Asn Leu Ile Asn Arg Arg Phe Gln Gln Met Asp				
	275	280	285		
15	gtg cta gag gga ctg aat gtc ctt gtg aca att tca gga aag aag aat				913
	Val Leu Glu Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asn				
	290	295	300		
20	aag cta cga gtt tac tat ctt tca tgg tta aga aac aga ata cta cat				961
	Lys Leu Arg Val Tyr Tyr Leu Ser Trp Leu Arg Asn Arg Ile Leu His				
	305	310	315	320	
25	aat gac cca gaa gta gaa aag aaa caa ggc tgg atc act gtt ggg gac				1009
	Asn Asp Pro Glu Val Glu Lys Lys Gln Gly Trp Ile Thr Val Gly Asp				
	325	330		335	
	ttg gaa ggc tgt ata cat tat aaa gtt gtt aaa tat gaa agg atc aaa				1057
	Leu Glu Gly Cys Ile His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys				
	340	345		350	
30	ttt ttg gtg att gcc tta aag aat gct gtg gaa ata tat gct tgg gct				1105
	Phe Leu Val Ile Ala Leu Lys Asn Ala Val Glu Ile Tyr Ala Trp Ala				
	355	360	365		
35	cct aaa ccg tat cat aaa ttc atg gca ttt aag tct ttt gca gat ctc				1153
	Pro Lys Pro Tyr His Lys Phe Met Ala Phe Lys Ser Phe Ala Asp Leu				
	370	375	380		
40	cag cac aag cct ctg cta gtt gat ctc acg gta gaa gaa ggt caa aga				1201
	Gln His Lys Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg				
	385	390	395	400	
45	tta aag gtt att ttt ggt tca cac act ggt ttc cat gta att gat gtt				1249
	Leu Lys Val Ile Phe Gly Ser His Thr Gly Phe His Val Ile Asp Val				
	405		410	415	
	gat tca gga aac tct tat gat atc tac ata cca tct cat att cag ggc				1297
	Asp Ser Gly Asn Ser Tyr Asp Ile Tyr Ile Pro Ser His Ile Gln Gly				
	420	425		430	
50	aat atc act cct cat gct att gtc atc ttg cct aaa				1333
	Asn Ile Thr Pro His Ala Ile Val Ile Leu Pro Lys				
	435	440			

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5 <213> Homo sapiens

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10 Arg Pro Met Lys Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu Ser  
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Glu Ser Ser Glu Glu Glu Glu Asp Gly Glu Ser Glu Thr His Asp  
15 35 40 45

Gly Thr Val Ala Val Ser Asp Ile Pro Arg Leu Ile Pro Thr Gly Ala  
50 55 60

20 Pro Gly Ser Asn Glu Gln Tyr Asn Val Gly Met Val Gly Thr His Gly  
65 70 75 80

Leu Glu Thr Ser His Ala Asp Ser Phe Ser Gly Ser Ile Ser Arg Glu  
85 90 95

25 Gly Thr Leu Met Ile Arg Glu Thr Ser Gly Glu Lys Lys Arg Ser Gly  
100 105 110

His Ser Asp Ser Asn Gly Phe Ala Gly His Ile Asn Leu Pro Asp Leu  
30 115 120 125

Val Gln Gln Ser His Ser Pro Ala Gly Thr Pro Thr Glu Gly Leu Gly  
130 135 140

35 Arg Val Ser Thr His Ser Gln Glu Met Asp Ser Gly Thr Glu Tyr Gly  
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Met Gly Ser Ser Thr Lys Ala Ser Phe Thr Pro Phe Val Asp Pro Arg  
165 170 175

40 Val Tyr Gln Thr Ser Pro Thr Asp Glu Asp Glu Asp Glu Glu Ser  
180 185 190

Ser Ala Ala Ala Leu Phe Thr Ser Glu Leu Leu Arg Gln Glu Gln Ala  
45 195 200 205

Lys Leu Asn Glu Ala Arg Lys Ile Ser Val Val Asn Val Asn Pro Thr  
210 215 220

50 Asn Ile Arg Pro His Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys  
225 230 235 240

Arg Phe Asn Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu  
245 250 255

Leu Val Gly Thr Glu Asn Gly Leu Met Leu Leu Asp Arg Ser Gly Gln  
260 265 270

5 Gly Lys Val Tyr Asn Leu Ile Asn Arg Arg Arg Phe Gln Gln Met Asp  
275 280 285

Val Leu Glu Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asn  
290 295 300

10 Lys Leu Arg Val Tyr Tyr Leu Ser Trp Leu Arg Asn Arg Ile Leu His  
305 310 315 320

Asn Asp Pro Glu Val Glu Lys Lys Gln Gly Trp Ile Thr Val Gly Asp  
15 325 330 335

Leu Glu Gly Cys Ile His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys  
340 345 350

20 Phe Leu Val Ile Ala Leu Lys Asn Ala Val Glu Ile Tyr Ala Trp Ala  
355 360 365

Pro Lys Pro Tyr His Lys Phe Met Ala Phe Lys Ser Phe Ala Asp Leu  
25 370 375 380

Gln His Lys Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg  
385 390 395 400

Leu Lys Val Ile Phe Gly Ser His Thr Gly Phe His Val Ile Asp Val  
30 405 410 415

Asp Ser Gly Asn Ser Tyr Asp Ile Tyr Ile Pro Ser His Ile Gln Gly  
420 425 430

35 Asn Ile Thr Pro His Ala Ile Val Ile Leu Pro Lys  
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Thr Ala Leu Ala Lys Glu Leu Arg Glu Leu Arg Ile Glu Glu Thr Asn  
1 5 10 15

cgc cca atg aag aag gtg act gat tac tcc tcc tcc agt gag gag tca 96  
Arg Pro Met Lys Lys Val Thr Asp Tyr Ser Ser Ser Glu Glu Ser

	20	25	30	
				144
5	gaa agt agc gag gaa gag gag gaa gat gga gag agc gag acc cat gat Glu Ser Ser Glu Glu Glu Glu Asp Gly Glu Ser Glu Thr His Asp 35	40	45	
				192
10	ggg aca gtg gct gtc agc gac ata ccc aga ctg ata cca aca gga gct Gly Thr Val Ala Val Ser Asp Ile Pro Arg Leu Ile Pro Thr Gly Ala 50	55	60	
				240
15	cca ggc agc aac gag cag tac aat gtg gga atg gtg ggg acg cat ggg Pro Gly Ser Asn Glu Gln Tyr Asn Val Gly Met Val Gly Thr His Gly 65	70	75	80
				288
20	ctg gag acc tct cat gcg gac agt ttc agc ggc agt att tca aga gaa Leu Glu Thr Ser His Ala Asp Ser Phe Ser Gly Ser Ile Ser Arg Glu 85	90	95	
				336
25	gga acc ttg atg att aga gag acg tct gga gag aag aag cga tct ggc Gly Thr Leu Met Ile Arg Glu Thr Ser Gly Glu Lys Lys Arg Ser Gly 100	105	110	
				384
30	cac agt gac agc aat ggc ttt gct ggc cac atc aac ctc cct gac ctg His Ser Asp Ser Asn Gly Phe Ala Gly His Ile Asn Leu Pro Asp Leu 115	120	125	
				432
35	gtg cag cag agc cat tct cca gct gga acc ccg act gag gga ctg ggg Val Gln Gln Ser His Ser Pro Ala Gly Thr Pro Thr Glu Gly Leu Gly 130	135	140	
				480
40	cgc gtc tca acc cat tcc cag gag atg gac tct ggg act gaa tat ggc Arg Val Ser Thr His Ser Gln Glu Met Asp Ser Gly Thr Glu Tyr Gly 145	150	155	160
				528
45	atg ggg agc agc acc aaa gcc tcc ttc acc ccc ttt gtg gac ccc aga Met Gly Ser Ser Thr Lys Ala Ser Phe Thr Pro Phe Val Asp Pro Arg 165	170	175	
				576
50	gta tac cag acg tct ccc act gat gaa gat gaa gag gat gag gaa tca Val Tyr Gln Thr Ser Pro Thr Asp Glu Asp Glu Asp Glu Ser 180	185	190	
				624
55	tca gcc gca gct ctg ttt act agc gaa ctt ctt agg caa gaa cag gcc Ser Ala Ala Ala Leu Phe Thr Ser Glu Leu Leu Arg Gln Glu Gln Ala 195	200	205	
				672
60	aaa ctc aat gaa gca aga aag att tcg gtg gta aat gta aac cca acc Lys Leu Asn Glu Ala Arg Lys Ile Ser Val Val Asn Val Asn Pro Thr 210	215	220	
				720
65	aac att cgg cct cat agc gac aca cca gaa atc aga aaa tac aag aaa Asn Ile Arg Pro His Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys 225	230	235	240

cga ttc aac tca gaa ata ctt tgt gca gct ctg tgg ggt gta aac ctt		768	
Arg Phe Asn Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu			
245	250	255	
5 ctg gtg ggg act gaa aat ggc ctg atg ctt ttg gac cga agt ggg caa		816	
Leu Val Gly Thr Glu Asn Gly Leu Met Leu Leu Asp Arg Ser Gly Gln			
260	265	270	
10 ggc aaa gtc tat aat ctg atc aac cgg agg cga ttt cag cag atg gat		864	
Gly Lys Val Tyr Asn Leu Ile Asn Arg Arg Arg Phe Gln Gln Met Asp			
275	280	285	
15 gtg cta gag gga ctg aat gtc ctt gtg aca att tca gga aag aag aat		912	
Val Leu Glu Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asn			
290	295	300	
20 aag cta cga gtt tac tat ctt tca tgg tta aga aac aga ata cta cat		960	
Lys Leu Arg Val Tyr Tyr Leu Ser Trp Leu Arg Asn Arg Ile Leu His			
305	310	315	320
25 ttg gaa ggc tgt ata cat tat aaa gtt gtt aaa tat gaa agg atc aaa		1056	
Leu Glu Gly Cys Ile His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys			
340	345	350	
30 ttt ttg gtg att gcc tta aag aat gct gtg gaa ata tat gct tgg gct		1104	
Phe Leu Val Ile Ala Leu Lys Asn Ala Val Glu Ile Tyr Ala Trp Ala			
355	360	365	
35 cct aaa ccg tat cat aaa ttc atg gca ttt aag tct ttt gca gat ctc		1152	
Pro Lys Pro Tyr His Lys Phe Met Ala Phe Lys Ser Phe Ala Asp Leu			
370	375	380	
40 cag cac aag cct ctg cta gtt gat ctc acg gta gaa gaa ggt caa aga		1200	
Gln His Lys Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg			
385	390	395	400
45 gat tca gga aac tct tat gat atc tac ata cca tct cat att cag ggc		1296	
Asp Ser Gly Asn Ser Tyr Asp Ile Tyr Ile Pro Ser His Ile Gln Gly			
420	425	430	
50 aat atc act cct cat gct att gtc atc ttg cct aaa		1332	
Asn Ile Thr Pro His Ala Ile Val Ile Leu Pro Lys			
435	440		